

07/22/05

DAF  
ERM



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT  
ABANDONED UNAVOIDABLY UNDER 37 CFR 1.137(a)**

First Named Inventor: NOSOV                      Art Unit: 1764  
Application Number: 09/509,256                      Examiner: Alexis A. Wachtel  
Filed: March 22, 2000                      Docket No.: P-001 ERM  
  
Title: X-RAY ABSORBING MATERIALS AND VARIANTS

Attn: OFFICE OF PETITIONS  
Mail Stop Petition, Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING BY EXPRESS MAIL:** I hereby certify that this correspondence is being sent to the U.S. Patent and Trademark Office by Express Mail by enclosing same in an envelope so marked, with tracking number EV 097 527 945 US, and by depositing same, with correct postage and addressed to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the following date:

**By: Adrienne Shirley                      Date: July 20, 2005**

**Signature:** Adrienne Shirley

SIR:

This is a Petition for Revival of an Application for Patent Abandoned Unavoidably Under 37 CFR 1.137(a). The above application became abandoned because applicants' response was apparently not received and recorded at the U.S. Patent Office, even though applicants' undersigned attorney duly submitted a proper, timely response by facsimile to the U.S. Patent Office at (703) 872-9306 on November 1, 2004. A copy of that Amendment is attached.

A grantable petition under 37 CFR 1.137(a) requires the following:

(1) **A petition fee.** A check for of \$250.00 is attached to this Petition in payment of the petition fee. If this is insufficient, please charge any remainder due to our account no. 10-0100.

(2) **A reply or an issue fee.** Applicant resubmits, with this Petition, a copy of the Amendment faxed November 1, 2004, to the U.S. Patent Office, as well as a copy of the fax confirmation sheet indicating that all pages of the Amendment were successfully transmitted.

(3) **An adequate showing of the cause of unavoidable abandonment is given below:**

It is respectfully submitted that applicants timely submitted a response to the outstanding Office Action. A timely and adequate response was filed by facsimile on November 1, 2004. This document was filed to the correct facsimile number for Art Unit 1764. For confirmation, please see the attached relevant portion of "Information Contacts" from the U.S. Patent and Trademark Office web site showing that the correct fax number is (703) 872 9306 – indeed, the one used in faxing applicants' response. Confirmation that all pages had been successfully faxed and were duly received, and a copy of the confirmation sheet, is attached hereto.

Page 1 of the Notice of Abandonment mailed March 21, 2005, states taken the position that the U.S. Patent Office has not received a responsive Amendment and that none was recorded. Therefore, a Notice of Abandonment was sent out on March 21, 2005.

Applicants cannot explain or be held responsible for what happened to their document once received at the U.S. Patent Office. It is assumed that the Amendment reached a fax station at that Office, but whether it was properly delivered to the correct Art Unit and Examiner, once received, is not known. It is clear, however, that a timely response was filed, and that the application went abandoned.

As this utility application was filed after June 8, 1995, no terminal disclaimer is required.

The interval between the receipt of the Notice of Abandonment of this application and the filing of this Petition was unavoidable. The application went abandoned because applicants had good reason to rely on their belief that a responsive Amendment had already been filed and

recorded. Applicant respectfully requests that this patent application be returned to prosecution in a prompt and timely fashion.

*Applicant hereby petitions that any and all extensions of time of the term necessary to render this response timely be granted. COSTS FOR SUCH EXTENSION(S) AND/OR ANY OTHER FEE DUE WITH THIS FEE DUE WITH THIS PAPER THAT ARE NOT FULLY COVERED BY AN ENCLOSED CHECK MAY BE CHARGED TO DEPOSIT ACCOUNT #10-0100.*

**Date: July 20, 2005**

Lackebach Siegel LLP  
One Chase Road, Scarsdale, NY 10583  
Telephone: 914 723 4300

MG/as

**Respectfully submitted,**

LACKENBACH SIEGEL LLP  
Attorneys for Applicant(s)  
Customer No. 28752

By: 

MYRON GREENSPAN  
Reg. No. 25,680



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**DECLARATION OF ANDREW F. YOUNG**

First Named Inventor: NOSOV                      Art Unit: 1764  
Application Number: 09/509,256                      Examiner: Alexis A. Wachtel  
Filed: March 22, 2000                      Docket No.: P-001 ERM

Title: X-RAY ABSORBING MATERIALS AND VARIANTS

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**By: Adrienne Shirley                      Date: July 20, 2005**

**Signature:** Adrienne Shirley

---

SIR:

I, Andrew F. Young, declare as follows:

1. I am an attorney with the firm Lackenbach Siegel LLP and have a place of residence at Floral Park, New York.
2. I submit this Declaration in support of the Petition for Revival of an Application for a Patent Abandoned Unavoidably Under 37 CFR 1.137(a).
3. I was the attorney that wrote and submitted the timely and responsive Amendment on November 1, 2004, which was sent by facsimile on November 1, 2004, in response to the July 1, 2004 Office Action. A complete copy of this timely submission, including the facsimile confirmation receipt, is attached to this Declaration as Exhibit A.

4. On November 1, 2004, I signed the "Certificate of Transmission" on the first page of the document indicating that the material was being faxed, and checked to make sure the fax number to which it would be sent was correct for the Central Office -- (703) 872 9306. A copy of this "Certificate of Transmission" is shown on the cover page of Exhibit A.

5. I faxed the sixteen-page document to the Central Facsimile Number.

6. Several minutes after faxing this document I received the standard facsimile confirmation sheet from our fax machine, which indicated that 16 of 16 pages had successfully been faxed to fax number (703) 872-9306 (see Exhibit A).

7. I then attached a copy of the document faxed into the file and reported another copy to our client.

8. I did not hear anything further from the U.S. Patent Office until our office received the Notice of Abandonment in the above matter.

9. Our office relies on fax confirmations to indicate that facsimiles have successfully reached their destinations.

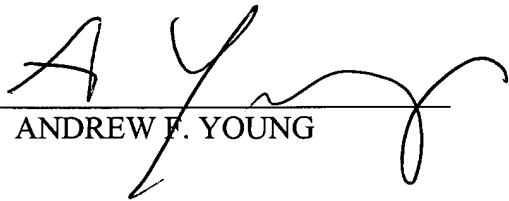
10. I do not know of any reason while this Amendment, having been received at the Central Fax Number at the U.S. Patent Office, would not have been promptly delivered to the appropriate Examiner.

11. On information and belief, I believe that an adequate response was indeed filed, and confirmed, by fax on November 1, 2004. I rely on confirmations from the firm's fax machines, and proceed in the belief that if a positive confirmation sheet is generated by the machine, the document has been successfully delivered.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these

statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: 7/20/05

  
\_\_\_\_\_  
ANDREW F. YOUNG

MODE = MEMORY TRANSMISSION

START=NOV-01 23:54

END=NOV-01 23:59

FILE NO.=425

STN COMM. ONE-TOUCH/ STATION NAME/TEL NO.  
NO. ABBR NO.  
001 OK 17038729306

PAGES DURATION

016/016 00:04:37

-LACKENBACH SIEGEL LLP -

\*\*\*\*\* -914 723 4301 - \*\*\*\*\*

\*\*\*\*\*

**Lackenbach**  
INTELLECTUAL PROPERTY  
ATTORNEYS SINCE 1923 **Siegel LLP**

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Fax:(914) 723-4301  
E-Mail:mail@lsllp.com

EXHIBIT A

## FAX COVER SHEET

To Fax No. :703-872-9306  
Applicant :NOSOV et al.  
Serial No. :09/509,256  
Filed :March 22, 2000  
For :X-RAY ABSORBING MATERIALS AND VARIANTS  
Examiner :WACHTEL, Alexis A.  
Art Unit :1764  
Our ref. no. :P-001  
Customer no. :28752

### CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service via Facsimile Transmission to (703) 872-9306 addressed to: Hon. Commissioner of Patents and Trademarks, P.O. Box 1450 Alexandria, VA 22131-1450 on:

Date :November 1, 2004  
By :Andrew Young, Esq.  
Signature

### AMENDMENT IN RESPONSE TO OFFICE ACTION

Mail Stop:  
Hon. Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Total Number of Pages Including This One : 16

Please deliver this Facsimile directly to Examiner Wachtel directly after entry.  
Enclosed please find:

- (1) Transmittal Sheet - signed (this page).
- (2) PTO/SB/17 - signed (1-page) for expected fees.
- (3) Complete Responsive Amendment - signed (14 pages).

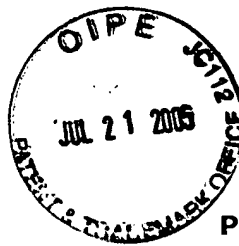
Please update the Official Record accordingly.

Very truly yours,

Andrew Young

Enclosures: As noted

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**Lackebach Siegel Building**  
**One Chase Road**  
**Scarsdale, New York, U.S.A. 10583**

**Phone:(914) 723-4300**  
**Fax:(914) 723-4301**  
**E-Mail:mail@lsllp.com**

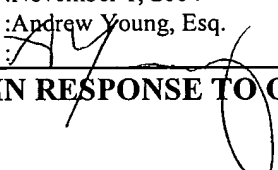
## FAX COVER SHEET

To Fax No. :703-872-9306  
Applicant :NOSOV et al.  
Serial No. :09/509,256  
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Examiner :WACHTEL, Alexis A.  
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Date :November 1, 2004  
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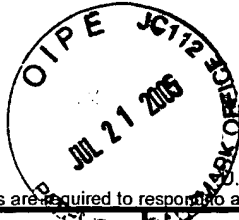
  
Andrew Young

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PTO/SB/17 (10-03)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ ) 98.00

**Complete if Known**

Application Number	09/509,256
Filing Date	3/22/00
First Named Inventor	Igor S. NOSOV
Examiner Name	Wachtel, Alesia A.
Art Unit	1764
Attorney Docket No.	ERMAK.P-001

**METHOD OF PAYMENT (check all that apply)**☒ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None☒ Deposit Account:Deposit  
Account  
Number  
Deposit  
Account  
Name

10-0100

LACKENBACH SIEGEL LLP

The Director is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Credit any overpayments☒ Charge any additional fee(s) or any underpayment of fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$ )

**2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE**

Total Claims	Extra Claims	Fee from below	Fee Paid
6	-20** = 0	X	0.00
Independent Claims	-3** =	X	43.0
Multiple Dependent			

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ ) 43.00

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Large Entity Small Entity

Fee Code (\$)	Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for <i>ex parte</i> reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	55.00
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ )

**SUBMITTED BY**

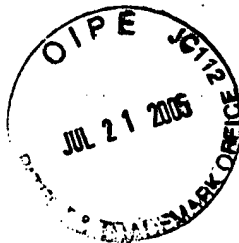
(Complete if applicable)

Name (Print/Type)	Andrew Young	Registration No. (Attorney/Agent)	44,001	Telephone	914-723-7350
Signature		Date	01-NOV-2004		

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



AMENDMENT

ERMAK.P-001

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant :NOSOV et al.  
Serial No. :09/509,256  
Filed :March 22, 2000  
For :X-RAY ABSORBING MATERIALS AND VARIANTS  
Examiner :WACHTEL, Alexis A.  
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Date :November 1, 2004  
By :Andrew Young, Esq.  
Signature :

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**AMENDMENT IN RESPONSE TO OFFICE ACTION**

Mail Stop:  
Hon. Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

SIR:

In response to the non-final office action mailed July 1, 2004, for which the requisite one-month extension is herein requested, kindly amend the above-identified U.S. patent application as follows:

**MARKED-UP VERSION****IN THE CLAIMS:**

Please amend claims as follows:

1. (previously presented) An X-ray absorbing material comprising:

a matrix with a fixed X-ray absorbing metal-containing filler in the form of dispersed particles, wherein said filler material is a poly-dispersed mixture that has been segregated by intermixing and that contains metallic particles having a size between  $10^{-9}$  and  $10^{-3}$  m fixed in a textile base that serves as a matrix; and wherein the particles are bonded to the surface of and embedded in said textile base, and where the density of the X-ray absorbing material as a whole, given that the X-ray absorbing properties are equal to those of the material used for the particles of the X-ray absorbing filler, is defined by the relation:

$$\rho_m = (0.01 - 0.20)\rho_p,$$

where  $\rho_m$  is the density of the X-ray absorbing material as a whole, and

$\rho_p$  is the density of the material used for the particles of the X-ray absorbing filler.

2. (previously presented) An X-ray absorbing material comprising:

a matrix with a fixed X-ray absorbing metal-containing filler in the form of dispersed particles, where said filler material is a poly-dispersed mixture that has been segregated by intermixing and that contains metallic particles having a size between  $10^{-9}$  and  $10^{-3}$  m, wherein said particles are surrounded by the volume of a matrix that is made of at least one compound that solidifies under atmospheric pressure, or made of a composition derived from a base of the same compound, and the total mass of the segregated, poly-dispersed mixture consisting of particles of the X-ray absorbing filler is defined by the relation:

$$M = (0.05 - 0.5) m,$$

where M is the total mass of the segregated poly-dispersed mixture consisting of the X-ray absorbing filler particles, and

m is the equivalent mass of the X-ray absorbing filler material equal in protective properties to mass M.

3. (previously presented) An X-ray absorbing material comprising:

a matrix with a fixed X-ray absorbing metal-containing filler in the form of dispersed particles, where said filler material is a poly-dispersed mixture containing metallic particles having a size between  $10^{-9}$  and  $10^{-3}$  m, wherein said particles are bonded to an intermediate substrate surrounded by the volume of the matrix formed of at least one compound that solidifies under pressure.

4. (previously presented) An X-ray absorbing material, as defined in claim 3, wherein:

a textile base is used as an intermediate substrate.

5. (currently amended) An X-ray absorbing material, ~~as defined in claim 3, wherein~~ comprising:

a matrix with a fixed X-ray absorbing metal-containing filler in the form of dispersed particles, where said filler material is a poly-dispersed mixture containing metallic particles having a size between  $10^{-9}$  and  $10^{-3}$  m, wherein said particles are bonded to an intermediate substrate surrounded by the volume of the matrix formed of at least one compound that solidifies under pressure; and

a mineral fiber is used as [an] said intermediate substrate.

6. (previously presented) An X-ray absorbing material comprising:

a matrix with a fixed X-ray absorbing metal-containing filler in the form of dispersed particles, where said filler material is a poly-dispersed mixture containing metallic particles having a size between  $10^{-9}$  and  $10^{-3}$  m, wherein said particles are bonded to an intermediate substrate surrounded by the volume of the matrix formed of a composition derived from at least one compound that solidifies under pressure.

**REMARKS**

Claims 1-6 are in the application.

Claims 1-2 were indicated as allowed on PTOL-326 but were later noted as rejected. In order to fulfill their obligation to respond to each and every rejection and objection raised, and to minimize possible confusion, Applicants state they will respond to the Examiner's comments as if the claims had been rejected.

Claims 3, 4, and 6 stand initially rejected.

Claim 5 stands objected to but allowable as dependent upon a rejected base claim.

Claim 5 has been amended as shown and is consequently proposed as allowable.

Favorable reconsideration is respectfully requested in view of the enclosed amendments and the following representations.

No new matter has been added. Support for the amendments is found in the original claims, specification, file history, and drawings.

**1. Rejections under 35 U.S.C. §102/103 regarding claims 1, 2, 3, 4, and 6 in view of Servant alone.**

Claims 1 and 2 stand initially rejected as either fully anticipated under §102(b) by Servant et al., or in the alternative, as being rendered solely obvious under §103(a) in view of Servant alone. Claims 3, 4, and 6 also stand initially rejected as fully anticipated under §102(b) solely by Servant.

Applicants will address the requisite legal standards (1) anticipation, (2) obviousness, (3) inherency, and (4) reasonable experimentation in this section to avoid later repetition.

Applicants note that MPEP §706.02(a) requires that Examiner rejections should be strictly confined to the "best available art." Here, the Servant reference has been cited as the sole best available art in all cases. As a consequence, in any subsequent action should a new or additional reference (or even a previously cited reference) be employed, Applicants request a full

opportunity to respond before a final condition since, based on the inherent assertion of sole “best available art,” no other reference presently exists alone or in combination with Servant of sufficient strength to cite. As a consequence, no future additional reference or combination can cause an final condition as no meeting of the minds would be sufficiently established to advance to that stage.

In initiating a initial rejection for anticipation for §102(b), the Examiner necessarily takes the position that the claims in question contain each and every element, limitation, condition, and requirement of the claims. The rejection is respectfully traversed and reconsideration is requested. In order to avoid rejection for anticipation, it is only necessary to show that a claim contains at least one element not disclosed in a single prior art reference.

In initiating an initial rejection for *prima facie* obviousness under §103(a), the Examiner necessarily takes the position that the sole prior art reference must teach or suggest all the claim limitations, elements, conditions, and requirements. MPEP § 2143. This rejection is respectfully traversed and reconsideration is requested. Applicants suggest that the Examiner’s assertions of inherency (for the reasons noted below) are insufficient to establish an initial *prima facie* obviousness rejection. In order to avoid the establishment of *prima facie* obviousness it is only necessary to show that the reference lacks at least one claim limitation, element, condition, or requirement, or alternatively, that the steep burden for inherency has not been initially established.

Before going further, it seems clear that the present invention has not been understood, and that a brief overview is recommended. Namely, in contrast to Servant, the instant invention’s teaching is that to increase X-ray absorbing capacity the mass is reduced while particle size is preferably selected ( a clear contradiction to Servant who teaches solely increased mass=increased X-ray resistance). As will be addressed, the Servant size teaching requires particles no smaller than 60  $\mu\text{m}$  ( $60 \times 10^{-6}$ ) while the instant invention provides for particles up to 400 times smaller (to  $1 \times 10^{-9}$ ).

The both new and non-obvious effect of Applicant's invention is based on the capacity of particles having sizes of between  $10^{-9}$  and  $10^{-3}$  m, to self-organized into energetically-interconnected ensembles that reduce the Roentgen radiation in an abnormally high degree by not blocking via direct a "direct impact" (although this occurs) but by inter-spacing themselves and interfering with the passage of X-rays. Such synergistic effect appears as the result of segregation of the said poly-dispersed particles by means of their mixing with each other and not by a combination of preferable mass-selection and plastic moment to retain flexibility as required by Servant.. Despite the many examples in Servant, the inherent disclosure is rather limited.

In sum, the instant invention surprisingly and substantially decreases the mass and thickness of an X-ray protective material while simultaneously achieving high X-ray protection via interference and absorption of the energy. Servant requires the replacement of lead with various other heavy dense metals (e.g., Uranium, Strontium, Barium, etc. (all known X-ray blockers) in an elastomeric composition with no less than 70wt% of the compositing being metal (col. 10, lines 55-58) (a clear contrast to Applicant's teaching).

Servant specifically teaches that the resultant product act solely a "supplement" to a pre-existing "radiation protection apparel." (Col 3, line 36-39). Thus, Servant in all fairness is incapable of "being substantially identical to," achieving the goals, or meeting the teachings of the instant invention absent seductive, but impermissible hindsight and undue experimentation without the leadership provided by the instant disclosure.

While Applicants addressed and discussed arguments of "Inherency" in their previous paper of April 5, 2004, Applicants respectfully propose that a full review is in order. Applicants note the following "inherency" presumptions (assumptions) raised by the Examiner:

(A) Section 4, second para.: "the disclosed particle size reads on a poly-dispersion since the term average as disclosed by Servant et al precludes the use of monodispersion" (in other words Savant's use of the term "average" inherently includes Applicants phrase "poly-dispersion")

(B) Section 4 second para.: “It is reasonable to presume [e.g, assume] that said limitations are inherent in the invention.” (emphasis added) based on:

- (i) “similar materials” - but discussed in stead regarding similar size, and
- (ii) similar production steps - avoiding the requirement of selecting different particle sizes.

In sum, the Examiner argues that the disclosure in Servant supports an inherency argument in an attempt to shift the burden of proof (see page 3, 3 lines from bottom). Unfortunately, this is not the case cannot be successful, while *In re Fitzgerald* (1980) (adopting *In re Best*) allows a limited type of inherency under special circumstances (not met here), and *In re Best* (1977) allows a combination of §102 and §103 jointly or alternatively, the burden on the Examiner is clearly extensive to prove **both** (A) that the resultant product is substantially identical, (MPEP 2112, V) **and** (B) that the Evidence exists to show that the missing matter is necessarily present in the Servant reference. *In re Oelrich*, 666 F.2d 578 (CCPA 1981) (see clearly requirement heading §2112 IV). As a consequence there are two (2) requirements to establishing an initial inherency argument, and for the reasons noted below Applicants suggest that this burden has not been met, and cannot be met based upon the single Servant et al. disclosure applied.

As a side note, it is critical to understand the subjugation (forced submission) of the USPTO/MPEP to the will and rulings of the CAFC, and it’s precursor the CCPA. In other words, the 1980 and 1977 references cited by the Examiner were long ago overruled by the below 1990, 1993 and 1999 decisions creating a different and much steeper mandate than the one asserted.

The Court of Appeals for the Federal Circuit, (whose rulings wholly control the USPTO) clearly understands this steep burden by requiring the following rules in recent decisions:

“To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is **necessarily present** in the thing described in the reference, and



that it would be so recognized by persons of ordinary skill in the art. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q2d 1949, 1050-51 (Fed. Cir. 1999) (see MPEP §2112 IV). (emphasis added)

Again the CAFC has clearly stated, “[t]he mere fact that a certain result or characteristic may occur is insufficient to establish inherency of the result and shift the burden of proof. See *In re Rijckaert* 9 F.3d 1531, 1534, 38 USPQ2d 1955 (1957 (Fed. Cir. 1993) (reversing rejection) (MPEP §2112).

Most importantly, “the Examiner must provide a basis in fact/and or technical reasoning to support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art. *Ex parte Eevy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990), MPEP §2112. (emphasis added)

Applicants respectfully assert that in view of the proper legal standard - identified above - the Examiner cannot assert a prima facie case of inherency, that the disclosure of Servant is not “substantially identical,” cannot “necessarily present” the same thing as claimed, provides at most mere “probabilities or possibilities, “ and provides no basis or theory or technical reasoning to reasonably support a rational determination that the allegedly ‘inherent characteristic’ necessarily flow from the teachings” of Servant (for the reasons below).

Before going further, Applicants respectfully note that when interpreting claim language, specifically the phrases poly-dispersed or polydispersion, and the above discussed formulas, the Applicants may be their own lexicographer as long as the meaning given to the term is not repugnant to the term’s well known usage. MPEP § 2173.01, 2111.01, MPEP §21783.05(a) and *In re Prater*, 415 F.2d 1393 and elsewhere. Applicants respectfully suggest

that it seems here that the Examiner may be attempting to interpret claim language according to a meaning clearly not dictated by the disclosure, as mandated by the rules

Applicants note for the record that there is, of course, no reference at all to the required element of polydispersion or a poly-dispersed mixture in Servant, or even the use of the phrase “distribution” of any kind (or any other distribution-type phrase).

In further example; regarding Section 4, the Examiner asserts that the term “average” as used by Servant “reads on” polydispersion since the term “average” as used by Servant “clearly precludes” the use of a “monodispersion. (See page 3, second para.)

In taking this position the Examiner necessarily takes the step of inferring (e.g., assuming) both (a) that the present invention eliminates uniform size particles and requires only non-uniform sized particles (somehow in a teaching in neither Servant’s nor Applicant’s), and (b) that the phrase “poly-dispersed” equals non-regular or non-uniform dispersion somehow within the instant meaning claimed

For the following reasons, Applicants respectfully propose this analysis is in clear error of both the reference, the disclosure, and the examination requirements of the Office and cannot be “substantially identical” to the instant invention.

(1<sup>st</sup>) “mono” does not equal “poly” (neither term exists in the reference)

(2<sup>nd</sup>) by sheer linguistic definition “average” cannot equal “polydispersion” since particles of the same size may be polydispersed.

(3<sup>rd</sup>) “average” as used in Servant is solely size-based and is contrary to dispersion (e.g., a position, or placement based use within a construct of any kind). As the Examiner has not illuminated a particular use of the phrase “average” for review, Applicants respectfully suggest the following size-based example (as used uniformly throughout the reference) as an illustration.

“ . . . and in particular have an average of about  
200 mesh (screened to greater than 60 microns).”  
(col. 9, lines 23-25)

To wit, the use of the term “average” in Servant is solely size-based and has no connection to positioning within a matrix.

By applying the term “segregation” by mixing the Applicants recite redistribution of the particles in the contents of the poly-disperse filler up to the appearance of energetically-interconnected ensembles. See Abstract etc.

An average particle size in Servant therefore has no meaning relative to overall distribution since, quite obviously, the Servant materials (particularly the up to 90wt% particles in any composition (and always >50wt%) may easily fall out of solution, fail to disperse in mixing, or by size segregate by weight in a solution without specific care unsupported in Servant (see col. 10, lines 55-57 specifically, and reference generally). Why? Servant achieves its goal solely by increasing total Atomic Mass through selection to maximize effect, a clear contradictory teaching to the instant invention elimination any possible “substantially identical” assertion.

Should the Examiner maintain a claim language interpretation not dictated by the disclosure, Applicants respectfully request an offer of proof that the claim language “poly dispersion” or “poly-dispersed” dictated by the specification and claims is repugnant to the well known usage and is solely understood by those skilled in the art as meaning “average.”

Additionally, after admitting in the record that “Servant et al fails to teach an article (e.g., required limitation/element) characterized by the Applicants invention” (claim 1) (page 4, first para.), the Examiner also raises the specter of “routine experimentation to determine optimal density”

(whatever optimal density is according to Servant).

Ignoring for the moment that this admission necessarily avoids both the §102 and §103 rejections, the Examiner has necessarily assumes a position that “it would have been a simple matter of routine experimentation.” Applicants respectfully disagree and note the following errors.

No reasonable amount of adjustment (or reasonable experimentation) within the required 70wt% minimum of the composition as metal (col 10, ln. 56) and 2.8-6.5 g/cc of total polymer composition - including the metal (col. 11, ln. 30), will reach the required claim limits in claims 1 and 2, particularly in Servant’s preferred range of 80-90wt% and 3-5 g/cc. Servant teaches specifically that the variable adjustment of elements is selected upon the spectrum of wavelengths in a specified spectrum. (Col. 9, lines 35). In other words, that once a graph like Fig. 5 is shown, a mixture meeting a particular wavelength of mass-blocking is selected. The direction of Servant is further limited by it’s direction to clothing that is additive to other radiation protection apparel (col 3, lines 37-38). In sum, the experimental teaching of Servant is to vary particle size of no less than 60 microns of a forced multi-sized particle group, into a 70wt% minimum elastomeric composition. This is in clear contradiction to the instant discussion and Applicants respectfully suggest that any attempts to “routinely experiment” in Applicant’s direction from Servant would be tortuous indeed.

To locate, based solely on Servant’s limited disclosure, the particular requirements of the present claim 1, the Examiner necessarily asserts that the claimed relation simply defined Applicant’s article as a whole and that Servant somehow also included this same relationship without further support or citation to the reference (lacking any support). Applicants respectfully suggest that this is a false and non-compliant analysis. To wit, see Section 4, last para. (Page 4), “[r]outine experimentation to determine the “optimal density” of the X-ray absorbing article as well as the total mass of the ..... that offers maximum flexibility and X-ray absorbing characteristics.” The Examiner cites to col. 11, lines 31-41 in support.

Applicants respectfully note that is disclosed in the referenced the Servant section cited that the reference requires the “composition” to have a range of 2.8 to 6.5g/cc, and more preferably 3-5 gr/cc. As specifically noted (col 10, lines 55-57) Servant also requires that the composition used to form the layer further require inclusion of 70-93% by weight of metallic particles.

Applicants are confused as to how Servant can both require a composition as light as 2.8g/cc while requiring it to have by weight at least 70% solid metal while still somehow disclosing the instant inventive relationship of extremely low density material concentration (as low as 1%) and by weight at a maximum of 50% - all without undue experimentation and of “substantial identical” nature - in sum in clear contradiction of Servant’s requirements.

The difference is at closest 20% by weight - well outside routine experimentation or substantial identical-ness.

According to Servant, the X-ray absorbing effect of the resulting composition is equal to the X-ray absorbing effect of the metallic particles contained therein, and as a consequence, that the metal in the composition functions solely with its ordinary atomic weight X-ray blocking properties inherent in such metals.

Applicants specifically note that claims 1, 2, 3, 4, and 6 mandate that the filler material be

- (1) a poly-dispersion;
- (2) a poly-dispersion containing metallic particles; and
- (3) the particles have the size dictated.

Applicants specifically note that claim 1 additionally requires that the density of the X-ray absorbing material as a whole be between 1% and 20% of the density of the metallic particles (see derivation of formula claimed). In sum, there is a huge difference in densities between the resultant material and the individual particles. In contrast Servant (col. 10, lines 55-59) requires that the

composition include at least 70% by weight metallic compounds, an preferable at least 80-90% by weight.

To wit, by applying the term “segregation” by mixing the Applicants recite redistribution of the particles in the contents of the poly-disperse filler up to the appearance of energetically-interconnected ensembles. An average material size in Servant therefore has no meaning relative to overall distribution since, quite obviously the Servant materials (particularly the up to 90wt% particles (and always >50wt%) would easily fall out of solution

Applicant’s respectfully propose that the Examiner’s assertions are clearly incorrect for the reasons stated above and that any burden has not been created or shifted to show obviousness much less inherency. It is noted again that the Servant reference fails to disclose or even suggest several of the specific claim limitations,

For the reasons noted above, each of these assumptions has been shown to be incorrect upon complete review of the Servant patent, its teachings, suggestions, and motivations. It is also respectfully suggested that the dual “substantially identical” and supporting evidence requirements of MPEP §2112 have not been met, and that the claims are both novel and non-obvious for that reason alone and for the detailed recitations each contains.

Reconsideration of the claims in light of the above review and discussion is earnestly asserted.

### **CONCLUSION**

Reconsideration and withdrawal of the rejection(s) is respectfully requested.

In view of the foregoing, the application is now believed to be in proper form for allowance and notice to that effect is earnestly solicited. Applicants propose respectfully that they have

responded to each and every rejection and objection raised by the Examiner in this case.

While Applicants have respectfully disagreed with the Examiner's rejection of the claims for the above reasons, Applicant's have elected to amend the claims for clarity only, and solely for the purpose of clarifying the patent application process in a manner consistent with the PTO's Patent Business Goals (PBG), 35 Fed. Reg. 54603 (September 8, 2000). Therefore, it is proposed that this amendment does not narrow the scope of the claims.

No new matter has been added. In the spirit of condensed and streamlined practice, if the Examiner believes that a telephone conference would be of value, he is respectfully requested to call the undersigned counsel at the number listed below for prompt response.

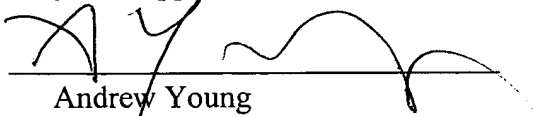
Applicant hereby petitions that any and all extensions of time of the term necessary to render this response timely be granted. COSTS FOR SUCH EXTENSION(S) AND/OR ANY OTHER FEE DUE WITH THIS FEE DUE WITH THIS PAPER THAT ARE NOT FULLY COVERED BY AN ENCLOSED CHECK MAY BE CHARGED TO DEPOSIT ACCOUNT #10-0100.

Date:  
November 1, 2004  
Lackebach Siegel LLP  
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AY/as  
Attached:  
ERMAK.P-001 ERM 11-1-04 amendment.wpd  
Attached: none

Respectfully submitted,

**LACKENBACH SIEGEL LLP**  
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By:   
Andrew Young  
Reg. No.: 44,001